Executive Summary

1 Project Scope

This study is an update of the City of Chula Vista's 1996 *Bikeway Master Plan*. According to the project request for proposal (RFP), the project scope is to provide a "new Bikeway Master Plan that will identify existing facilities and bicycle deficiencies throughout the City, along with cost estimates to make improvements. The objective of the new Bikeway Master Plan is to review and make recommendations as to how the current bikeway network within the City planning area can be updated to best suit the needs of the City now and in the future."

The project scope therefore included documenting and evaluating Chula Vista's existing bikeway facility system and its relationship with other systems such as mass transit, and recommending improvements wherever appropriate in conjunction with the City's 2005 General Plan Update.

2 Project Study Area

The project study area was the City of Chula Vista and its planning sphere of influence of the surrounding communities and unincorporated County areas. Adjoining area's bicycle systems were evaluated for opportunities as connections with Chula Vista's and to extend the regional network via Chula Vista's bikeway system. (See Figure 1-1: Project Location.)

3 Project Approach and Goals

The overall approach for this master plan is summarized in the following paragraphs. The approaches listed below also constitute the planning goals for this study.

• The bicycle master plan should be integrated into all transportation plans, especially if the proposed bicycle facilities will use general purpose roads shared with other forms of transportation. The planning efforts should include the integration of various modes of transportation including transfers between modes at transit centers and park and ride facilities.

• The aim of planning for bicycles should not be focused on any particular facility type so much as it should be focused on the safe and efficient travel of cyclists. This will generally require both the use of the existing transportation infrastructure and the construction of special facilities for cyclists.

• The maintenance of bicycle facilities and the monitoring and assessment of their performance are critical for ensuring safe and efficient travel for cyclists. Planning for cyclists is an ongoing process.

• The coexistence of cyclists and drivers on roads requires that both are sensitive to and recognize a common set of rules. Training, education and enforcement are as important as physical planning and design.

• It is imperative that a “bicycle perspective” guides any planning for cyclists. The bicycle has its own characteristics, constraints and opportunities that the planner must consider. This must be combined with the recognition that cyclists do not form a homogeneous group in terms of age, ability, experience or traffic judgment.

• An integration of land use planning and transportation planning is needed in order to support future projects that are not intensively dependent on the automobile. This study needs to take into account future land use and population projections and provide bicycle facilities to help decrease auto dependence.

4 Methodology

The project methodology included a review of applicable documents, field work, a mail-in survey questionnaire and geographic information systems (GIS) analysis of the field work data. Chula Vista’s existing bikeway system was analyzed for a number of factors using both traditional field survey and GIS techniques.

Literature Review
Applicable sections of documents related to Chula Vista’s bikeway system are excerpted in Chapter 2. These include the current City of Chula Vista’s *General Plan* and 1996 *Bikeway Master Plan*, as well as neighboring community, regional and state plans and guidelines.

Survey Questionnaire
The questionnaire was developed to reveal as much as possible about current user numbers, user types, preferred facility types and times of use. The questionnaire was distributed to San Diego County Bike Coalition members via their regular monthly mailing. Copies were also placed at several area bicycle shops and City facilities such as libraries and community centers. (See Section 7.5: Questionnaire Response and Analysis.)

Geographic Information Systems
A Geographic Information System (GIS) is an organized collection of computer hardware, software, geographic data and personnel designed to efficiently capture, store, update, manipulate, analyze and display all forms of geographically referenced information. A GIS does not store a map in the conventional sense, nor does it store a particular image or view of a geographic area. Instead, a GIS stores the data from which a user can draw a desired view to suit a particular purpose.

Several data sources were used to contribute to the GIS data base for this project. Much of the land use data used in Chapters 4 and 5 to evaluate trip origins and destinations were acquired from SANDAG and roads data came from the City of Chula Vista. The majority of the maps in this report were generated from a single data base compiled specifically for this project from these sources.

Field Work
Consultant staff members drove all mapped bikeway facilities both to verify accuracy with respect to the regional GIS bikeway mapping data received from SANDAG and to see firsthand the full extent of the existing bikeway system. Consultant staff also rode many of these routes, especially those that did not appear to be consistent with the data or appeared to merit closer evaluation. This is a routine part of the consultant’s process because it is considered important to experience the existing and proposed bikeway system from the perspective of the cyclist.

5 Significant Findings and Recommendations

This update reflects the previous bikeway master plan in reiterating several projects originally proposed, but not implemented. Like many updates, the majority of proposed facilities tend to fill gaps in the existing bikeway system. Since this was an update, the intent was to complete facilities so that cyclists can expect more consistent, and therefore safer, conditions.

Topography and Development Pattern

The older, more level western area of Chula Vista (generally west of I-805) is well served by numerous Class 3 routes, allowing cyclists to access most desired destinations via multiple routes. The traditional grid pattern of relatively narrow streets effectively disperses traffic. Because these streets are relatively narrow based on current standards, Class 2 lanes are not recommended. This is due to the costly measures that would be needed to widen existing roadways to allow Class 2 lanes and the ensuing parking and access disruptions for local residents and businesses. The prevalence of Class 3 routes still serves to satisfy cyclist demand in western Chula Vista and is in keeping with existing use levels and historic development pattern. If cycling demand increases in the future, the existing bikeway system configuration will need to be reevaluated.

On the other hand, the major roadways within newer eastern area of Chula Vista (generally east of I-805) reflect current street standards and, as part of City policy, routinely incorporate Class 2 bike lanes. However, primarily due to this conventional development pattern, these bike lanes are commonly on roadways with much higher levels of motor vehicle traffic and higher posted speed limits than in the western part of Chula Vista. This means that though cyclists have wider, more visible facilities, they share the roadways with more and faster moving motor vehicles.

This dilemma is common to recently developed cities laid out in a conventional suburban pattern. Even though this appears to reflect suburban development as commonly employed across the country, in eastern Chula Vista this pattern was not arbitrarily imposed on the land, but was driven by local topography. In eastern Chula Vista's case, major arterials follow the east-west ridgelines and the connecting side streets were laid out in relation to the local topography which limits the number of feasible arterial connections.

Eastern Chula Vista also has much more significant grades, particularly in the north-south direction. This local topography requires cyclists to ride up and down fairly steep and often long grades. In many cases, these north-south grades are steep enough to discourage casual cyclists and less hilly alternate routes are generally not available.

Education

Even though the two distinctive major areas of Chula Vista have their disadvantages for cyclists, the tighter roadway widths in the west and the higher motor vehicle volumes and speeds in the east can be mitigated somewhat with education for all roadway users. This was commonly mentioned in user questionnaires and has been seen in other bikeway master plan projects as well. Cyclists feel that motorists are generally not aware and do not respect cyclists' rights to use the roadways. Motorists counter that they frequently see cyclists disobeying basic traffic rules, especially riding the wrong way and failing to stop at stop signs and traffic signals.

Education can alleviate much of this misunderstanding, especially if exposure occurs early in life. However, expanding an educational program may be difficult to accomplish in the near future, considering the abysmally low percentage of children who ride bicycles to and from school. A survey of local schools showed that an average of only 1.5% of students rode bikes to school. Some schools do not even allow bicycle use.

Connectivity Issues

Within Chula Vista, the interstate highways create some connectivity problems for cyclists, especially where they must cross at conventional interchanges without bikeway facilities. Few interchanges have Class 2 bike lanes and some are not even designated as Class 3. The roadway within the freeway shadow is often a gap in otherwise consistent bikeway facilities. Without visible bicycle lane striping and signage, for instance, cyclists feel less secure making the passage under or over a freeway. Motorists lack the important visual cues that remind them to be aware of cyclists where they especially need reminding since this is where so many motor vehicle turning and lane changing movements routinely occur. Perhaps Portland, Oregon's "Blue Bike Lanes" may have a place at such interchanges because they have been shown to improve safety by enhancing motorist awareness through improved bikeway facility visibility (www.trans.ci.portland.or.us).

Integration with Greenbelt System

Chula Vista is relatively physiographically isolated from adjoining communities due to its location between river valleys to the north and south and San Diego Bay to the west. Completion of the Bayshore Bikeway and future connections to the Sweetwater River Bikeway will improve regional access, but integration of the bikeway system with the proposed greenbelt system deserves further study. Though it is intended primarily for recreational use and unlikely to be paved to the standards of a Class 1 bikeway facility, it will probably receive significant bicycle use. This is because the vast majority of bicycles in use today are "mountain bikes" designed for off-road use or are derivatives of the mountain bike that retain the elements that made them so popular. This new category of bikes has been coined "comfort bikes" and their percentage of bicycle sales continues to increase, even as overall bicycle sales lag from a turn-of-the-century peak.

Not surprisingly, many of these comfort bike buyers are novices who will find riding on wide, relatively flat trails through open space without the constant presence of motor vehicles very attractive. The ability to circumnavigate the entire City without having to ride on streets will draw cyclists of all skill levels and will encourage others to try cycling. In other words, build it and they will come.

Even though the proposed greenbelt trail system will be designed as a recreational asset, it should be integrally linked with the bikeway system. Its extent and shallow grades are likely to make it a popular commuting route. Given the choice of making the daily commute on high volume, high speed arterials, some with significant grades, these relatively flat non-motorized trails through open space will be an attractive option for experienced commuting cyclists as well.

The Future of Cycling

Societal attitudes seem to be at least partly to blame for the trend toward children's inability to get proper amounts of exercise. The number of children riding bikes to school averages just 1.5%. The Chula Vista Police Department has held bicycle rodeos in the past as a way to educate children about safe and effective cycling, but the program requires grant funding to be resurrected. School administrators say this trend to reduced physical activity is

driven primarily by parents' fear of letting their children out of their sight, even briefly, and the widely held belief that cycling is inherently dangerous. Even after getting home from school, many children play indoors at activities that do not benefit bodily health.

The Safe Routes to School Program may offer some answers to encourage more children to ride and more parents to let them (www.4saferoutes.org). The goal of the program is to build a physical environment and encourage a social climate that supports California children's ability to walk or bicycle safely to school. This is likely to reduce childhood injury, obesity, respiratory illness and the risk of later cardiovascular disease. Getting around under one's own power is also a way for children to better connect with their communities and their natural environment.

School administrators will benefit from fewer vehicles congesting school pick-up and drop-off points. Encouraging a reduced dependence on motor vehicles early in life should help young people to regain the level of activity that was once common, that today's adults grew up with and is still considered essential for health. Creating an environment where riding a bike is once again considered normal and safe can only help.